

### **REMARKS**

Applicants respectfully request reconsideration of the present application. No new matter has been added to the present application. Claims 1-6, 8-26, 28-46, and 48-60 have been rejected in the Office action. No claims have been amended, no new claims have been added, and no claims have been canceled in this Response. Accordingly, claims 1-6, 8-26, 28-46, and 48-60 are pending herein. Claims 1-6, 8-26, 28-46, and 48-60 are believed to be in condition for allowance and such favorable action is respectfully requested.

#### **Rejections based on 35 U.S.C. § 103**

##### **A. Applicable Authority**

Title 35 U.S.C. § 103(a) declares, a patent shall not issue when “the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.” The Supreme Court in *Graham v. John Deere* counseled that an obviousness determination is made by identifying: the scope and content of the prior art; the level of ordinary skill in the prior art; the differences between the claimed invention and prior art references; and secondary considerations. *Graham v. John Deere Co.*, 383 U.S. 1 (1966).

To support a finding of obviousness, the initial burden is on the Office to apply the framework outlined in *Graham* and to provide some reason, or suggestions or motivations found either in the prior art references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the prior art reference or to combine prior art reference teachings to produce the claimed invention. See, *Application of Bergel*, 292 F. 2d 955, 956-957 (1961). Thus, in order “[t]o establish a *prima facie* case of obviousness, three basic criteria must

be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success [in combining the references]. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations.” *See* MPEP § 2143. Recently, the Supreme Court elaborated, at pages 13-14 of *KSR*, it will be necessary for [the Office] to look at interrelated teachings of multiple [prior art references]; the effects of demands known to the design community or present in the marketplace; and the background knowledge possessed by [one of] ordinary skill in the art, all in order to determine whether there was an apparent reason to combine the known elements in the fashion claimed by the [patent application].” *KSR v. Teleflex*, 127 S. Ct. 1727 (2007).

B. Rejections based on Binsted

Claims 1-6, 8-9, 11-16, 20-26, 28, 29, 31-36, 40-46, 48, 49, 51-56, and 60 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Kim Binsted et al., “Generating Personalised Patient Information using the Medical Record,” 1995. (the “Binsted reference”). Applicants respectfully submit that a *prima facie* case of obviousness has not been established for claims 1-6, 8-9, 11-16, 20-26, 28, 29, 31-36, 40-46, 48, 49, 51-56, and 60. In particular, the Binsted reference fails to teach or suggest all the claim limitations for each of claims 1-6, 8-9, 11-16, 20-26, 28, 29, 31-36, 40-46, 48, 49, 51-56, and 60. Additionally, there is no apparent reason to modify the Binsted reference in the fashion claimed in the present patent application. Accordingly, Applicants respectfully traverse this rejection, as hereinafter set forth.

Referring initially to independent claim 1, a method in a computer system for translating medical test results into plain language is recited. The method includes receiving a

medical test result for a type of medical test and determining if the medical test result will be automatically interpreted independent of clinician input or if the medical test result will be interpreted using clinician input. If the medical test result will be automatically interpreted independent of clinician input, at least one template associated with the type of medical test is identified. A template matching the medical test result is selected, and a plain language explanation based on the selected template is outputted.

In contrast to the invention of claim 1, the Binsted reference discusses a system that automatically generates explanations of items in patient records based on a medical knowledge base and the patients' medical records. *See, e.g., Binsted*, p. 29 and 30. The system also allows medical personnel to review the automatically generated explanations. *Id.*, p. 30.

Applicants respectfully submit that the Binsted reference fails to teach or suggest all the limitations of claim 1. For instance, the Binsted reference fails to teach or suggest "determining if the medical test result will be automatically interpreted independent of clinician input or if the medical test result will be interpreted using clinician input." On page 3, the Office action admits that the Binsted reference does not teach this limitation. However, the Office action alleges that the Binsted reference suggests this limitation referring to a discussion within the Binsted reference of allowing medical personnel to review generated explanations. Applicants respectfully disagree with this conclusion. In particular, the portion of the Binsted reference cited by the Office Action indicates: "It is essential that a medical expert be able to check through the generated explanations – that is, the explanations must not vary in unpredictable ways. The system must not 'put words in the doctor's mouth' by adding information to the record, either explicitly or implicitly." *Binsted*, p. 30. This cited portion of the Binsted reference merely indicates that medical personnel can review an explanation after the

system has automatically generated the explanation. However, allowing medical personnel to review a system-generated explanation does not correspond with or even suggest a determination of whether a “medical test result will be automatically interpreted independent of clinician input or if the medical test result will be interpreted using clinician” as recited in claim 1. The cited portion of the Binsted reference refers to medical personnel review after the system has automatically generated an explanation, whereas the recitation in claim 1 is directed to a threshold determination of whether the system will even automatically interpret the medical test result or if the result will be manually interpreted by a clinician (i.e., no automatic interpretation by the system).

In view of the above, it is respectfully submitted that the Binsted reference fails to teach or suggest all the limitations of independent claim 1. Additionally, there is no apparent reason why one of ordinary skill in the art would have modified Binsted to achieve the invention of claim 1. As such, independent claim 1 is patentable over the Binsted reference, and Applicants respectfully request withdrawal of the 35 U.S.C. § 103(a) rejection of independent claim 1.

Each of independent claims 21 and 41 include limitations similar to those recited in independent claim 1. As such, it is respectfully submitted that the Binsted reference fails to teach or suggest all the claim limitations of independent claims 21 and 41 for at least the same reasons as noted above for independent claim 1. Independent claims 21 and 41 are patentable over the Binsted reference, and Applicants respectfully request withdrawal of the 35 U.S.C. § 103(a) rejection of independent claims 21 and 41.

Claims 2-6, 8-9, 11-16, 20, 22-26, 28, 29, 31-36, 40, 42-46, 48, 49, 51-56, and 60 depend from independent claims 1, 21, and 41. Accordingly, these claims are believed to be in

condition for allowance for at least the above-cited reasons. As such, Applicants respectfully request withdrawal of the 35 U.S.C. § 103(a) rejections of claims 2-6, 8-9, 11-16, 20, 22-26, 28, 29, 31-36, 40, 42-46, 48, 49, 51-56, and 60 as well. Dependent claims 2-6, 8-9, 11-16, 20, 22-26, 28, 29, 31-36, 40, 42-46, 48, 49, 51-56, and 60 are believed to be in condition for allowance and such favorable action is respectfully requested.

Furthermore, many of these dependent claims are separately patentable because they contain additional limitations not found in the Binsted reference. For example, in claims 8, 28, and 48, if the system determines that the medical test result will be interpreted using clinician input, the system sends the medical test result to the clinician and the clinician may match the medical test result to a template. In contrast to the feature recited in these claims, the Binsted merely discusses allowing a medical expert to review explanations automatically generated by the system. These generated explanations in Binsted are not the medical test results, and the reference is silent with respect to sending medical test results to a clinician and allowing the clinician to match the medical test result to a template. As such, the Binsted reference fails to teach or suggest this limitation of these claims in context of their respective base claims.

C. Rejections based on Binsted and Rapaport

Claims 10, 17-19, 30, 37-39, 50, and 57-59 were rejected under 35 U.S.C. § 103(a) as being unpatentable over the Binsted reference in view of U.S. Patent No. 5,926,526 to Rapaport et al. (the “Rapaport reference”). Applicants respectfully submit that a *prima facie* case of obviousness has not been established for claims 10, 17-19, 30, 37-39, 50, and 57-59. In particular, claims 10, 17-19, 30, 37-39, 50, and 57-59 depend from independent claims 1, 21, and 41, and, as such, are patentable over the Binsted reference for at least the reasons cited above. The Rapaport reference fails to cure the deficiencies of Binsted. Accordingly, these claims are

believed to be in condition for allowance. As such, Applicants respectfully request withdrawal of the 35 U.S.C. § 103(a) rejections of claims 10, 17-19, 30, 37-39, 50, and 57-59. Dependent claims 10, 17-19, 30, 37-39, 50, and 57-59 are believed to be in condition for allowance and such favorable action is respectfully requested.

### **CONCLUSION**

For at least the reasons stated above, claims 1-6, 8-26, 28-46, and 48-60 are now in condition for allowance. Applicants respectfully request withdrawal of the pending rejections and allowance of claims 1-6, 8-26, 28-46, and 48-60. If any issues remain that would prevent issuance of this application, the Examiner is urged to contact the undersigned by telephone prior to issuing a subsequent action. It is believed that no fee is due in conjunction with the present amendment. However, if this belief is in error, the Commissioner is hereby authorized to charge any amount required to Deposit Account No. 19-2112.

Respectfully submitted,

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